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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/549,883	09/16/2005	Marion Komelia Matters-Kammerer	DE030092	7484
65913	7590	12/03/2007		
NXP, B.V. NXP INTELLECTUAL PROPERTY DEPARTMENT M/S41-SJ 1109 MCKAY DRIVE SAN JOSE, CA 95131			EXAMINER LEE, BENNY T	
			ART UNIT 2817	PAPER NUMBER
			NOTIFICATION DATE 12/03/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

Office Action Summary

Application No.

10/549,883

Applicant(s)

MATTERS-KAMMERER, MARION
KORNELIA

Examiner

Benny Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October & 30 July 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 5-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 6-8 is/are rejected.
- 7) ☒ Claim(s) 5 and 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2007 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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The disclosure is objected to because of the following informalities: Note that subheadings still need to be provided to delineate the different sections of the specification. Page 2, line 11, note that reference to “point 1 to point 2” is still vague in meaning and needs clarification. Page 4, regarding the brief descriptions of “Figs. 1(a), 1(b) and 1(c)”, note that these descriptions need to be labeled --prior art-- herein, such as to be consistent with their designation. In the replacement paragraph to page 4, line 27, fourth line therein, note that “epsilon.sub.medium” should be rewritten as ϵ_{medium} for an appropriate characterization; 7th line therein, note that “d.sub.medium” should be rewritten as d_{medium} for an appropriate characterization; 11th line therein, note that “said” should be rewritten as --the-- for an appropriate characterization; 13th line therein, note that “surrounds the latter” should be rephrased for clarity of description. Page 5, lines 5, 6, note that for the description of “Fig. 3”, such description needs further elaboration as to the specific features depicted in that drawing figure. In the replacement paragraph to page 5, line 10, 8th line therein, note that each occurrence of “.mu.m” should be rewritten as μm for an appropriate characterization; 10th line therein, note that --(see Fig. 5a)-- should be inserted after “30” for clarity of description. Note that the following reference labels need to be described with respect to the corresponding drawing figure: Fig. 2 (w, h₁, w/h₁>3); Fig. 4 (+10%, -10%); Fig. 5a (22, 24, 30, w, h₂, w/h₂>3); Fig. 7 (10, 18, 22, 24, d=25 μm , ϵ =20). Appropriate correction is required.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The ratios of “w” to “h₁” & “w” to “h₂” need to be respectively described in the specification.

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Claims 6, 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 6, 7, note that these claims improperly depend from canceled "claim 3".

In claim 6, note that the following parameters: (ϵ , ϵ_{medium} , d_{medium}) found in the equation need to be strictly defined in this claim.

The following claims have been found to be objectionable for reasons set forth below:

In claim 2, line 1, note that a status identifier needs to be provided for this claim; lines 2, 4, 5, note that the reference numbers therein should be deleted as being unnecessary; lines 2, 4, note that --common-- should be inserted prior to each occurrence of "plane" for clarity of description; line 2, note that --the-- should be inserted prior to "capacitor" & "line", respectively for clarity of description.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komazaki et al in view of Saitoh et al (both of record).

Komazaki et al {e.g. Figs. 3(a) – Fig. 3(d)} discloses an LC filter configuration comprising a multi-layer stack of dielectric layers formed by a laminated process, including a dielectric block (e.g. 36-n) and a dielectric layer (i.e. dielectric plate D3) disposed underneath (i.e. below) the dielectric block (e.g. 36-n). Note that since the dielectric plate is larger than the

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dielectric block, the dielectric plate inherently “surrounds” the extent of the dielectric block.

Note that Komazaki et al discloses that the dielectric block (e.g. 36-n) is comprised of a ceramic material having a dielectric constant of approximately 75 (e.g. see column 4, lines 51-53), and as such would have had a higher dielectric constant than that of the surrounding dielectric plate, which is approximately 4.5, as described at column 3, lines 57-60. It should be noted that the dielectric block (e.g. 36-n) includes strip-lines (e.g. 38-n) disposed on a surface thereof, such as to realize a metallization structure. Note that as described at column 2, lines 63-68, the metallization structure defines a filter, which may be comprised of either of a $\frac{1}{4}$ or $\frac{1}{2}$ wavelength resonators. Moreover, as known by those of ordinary skill in the art, such resonators inherently function as a “coil” (i.e. by virtue of the distributed inductance along the metallization structure) and a capacitor electrode (i.e. as formed by the metallization structure relative to an underlying ground plane (e.g. 12) through the thickness of the dielectric block). Note that in a variation of the Fig. 3(a) – 3(d) embodiment, Fig. 4(a) additionally discloses the addition of a separate dielectric plate (40) which is approximately the same size as the dielectric block covered by a plating (e.g. 40a functioning as an upper ground plane), e.g. as described at column 7, lines 50-57, such as to provide the effect of reduction in the loss of the filter. However, Komazaki et al differs from the claimed invention in that Komazaki et al does not provide explicit dimensions of the width of the metallization structure relative to the distance to the respective lower and upper ground planes, such as recited in claims 1 & 2, respectively.

Saitoh et al (e.g. Figs. 4, 5) discloses a metallization structure (e.g. 21, 22, 31, 32) disposed on a dielectric plate (1) having a ground conductor (7) disposed on an opposite surface thereof to thereby function as a band pass filter. Note in particular that since the metallization

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structures (31, 32) are described as “open ended conductors”, such an arrangement corresponds to a $\frac{1}{2}$ wavelength type resonator filter. Furthermore, note that as described at column 3, lines 39-47, the metallization structures (31, 32) have a width dimension (i.e. l_3) which is 5 mm and a dielectric plate thickness of 0.8 mm, thereby providing a width to thickness ratio of (5mm/0.8mm), thereby yielding a ratio which is greater than 6.

Accordingly, it would have been obvious in view of the references, taken as a whole, to have substituted the band pass filter structure taught by Saitoh et al in place of the filter (36-n) of Komazaki et al, as to have provided the required width to thickness ratio which is greater than 3. Such a modification would have been considered an obvious substitution of art recognized equivalent filter structures from the same field of endeavor (i.e. the filter of each reference is formed on a dielectric plate over a ground plane), thereby suggesting the obviousness of such a modification. Note that, in addition to the indicated width to thickness ratio, an obvious consequence of such a modification would have resulted in the dielectric constant of the filter dielectric being necessarily higher than that of the underlying dielectric plate, as to be consistent with the teaching of Komazaki et al. With respect to the limitations of claim 2, note that as an obvious consequence of the modification using the Saitoh et al filter, such a modified filter would have necessarily have included the separate dielectric plate (40) with ground plane (40a) disposed over the filter as to have provided the benefit of reduce losses, such as taught by Komazaki et al. Furthermore, since the separate dielectric plate is described to be the same size as the filter block, then obviously, it would have the same thickness as that of the filter block, and thus it would likewise have the same width to thickness ratio as that of the modified filter, thereby meeting the limitations recited in claim 2.

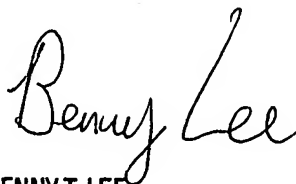
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Applicant's arguments with respect to claims 1, 2 have been considered but are moot in view of the new grounds of rejection.

Claims 5, 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claim.

Any inquiry concerning this communication should be directed to Benny Lee at telephone number 571 272 1764.

B. Lee

A handwritten signature in cursive script that reads "Benny Lee".

BENNY T. LEE
PRIMARY EXAMINER
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